



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,263	03/09/2001	Michael J. Frerking	00H1451	8542

24234 7590 02/10/2005

SIMMONS, PERRINE, ALBRIGHT & ELLWOOD, P.L.C.
THIRD FLOOR TOWER PLACE
22 SOUTH LINN STREET
IOWA CITY, IA 52240

EXAMINER

KANG, INSUN

ART UNIT PAPER NUMBER

2124

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/681,263	Applicant(s) FRERKING ET AL.	
	Examiner Insun Kang	Art Unit 2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

?

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed 9/27/2004.
2. Claims 1-48 are pending in the application.

Oath/Declaration

3. The declaration filed 3/9/2001 has been acknowledged.

Specification

4. The objection to the specification has been withdrawn due to the amendment to the specification.

Drawings

5. The objection to the drawings has been withdrawn due to the amendment to the drawings.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bayeh (US Patent 6,223,202) in view of Minard (US Patent 6,247,020).

Per claims 1 and 48:

Bayeh discloses a multiple virtual machine environment ("computer program for enabling multiple virtual machines to execute on a single server, using virtual machine pooling" abstract). Bayeh does not explicitly teach using a builder tool to create a target executable file for a multiple virtual machine environment. However, Minard teaches a builder tool to create a target executable file was known in the art of software development, at the time applicant's invention was made, to ease software development effort, increase one's productivity providing a user friendly development environment such that disclosed in Minard (col 3 lines 20-40). It would have been obvious for one skilled in the art of computer software development to modify Bayeh's disclosed system to use a builder tool for a multiple virtual machine environment. The modification would be obvious because one skilled in the art would be motivated to "increase one's productivity,...and simplify one's job (col 3 lines 20-40)" providing a user friendly development environment as taught by Minard.

Minard further discloses:

- a display component ("visual development ...provided by the system... comprises a main window," col 6 lines 30-35; Fig. 3)
- an overview component (See Fig 3)
- a parameter detail component, presented on said display component concurrently with display, in said overview component (Fig 3)
- wherein said parameter detail component displays parameter information associated with at least one of said overview component (Fig 6A)

Art Unit: 2124

Per claim 2:

The rejection of claim 1 is incorporated, and further, Minard discloses a project choice (Fig. 5A; "Open a project," col 7 Button table).

Per claim 3:

The rejection of claim 2 is incorporated, and further, Minard discloses a plurality of choices (Fig. 5B, "Saves the current project and all changed files that are shown in the system's project tree," col 7 Button table).

Per claim 4:

The rejection of claim 1 is incorporated, and further, Minard discloses a plurality of associated virtual machine parameter group designators ("parameters - diaglog box," in Button table in Col 7; col 5 lines 28-35).

Per claim 5:

The rejection of claim 4 is incorporated, and further, Minard discloses a tree structure ("hierarchical tree... view," col 11 lines 25, Fig 8B; Fig 3, 4B, 6A).

Per claim 6:

The rejection of claim 4 is incorporated, and further, Minard discloses an index tab structure ("Tabbed view," Fig 8B; Fig 3, 4B, 6A).

Art Unit: 2124

Per claim 7:

The rejection of claim 4 is incorporated, and further, Minard discloses a main menu and sub-menu structure ("File|Save|Project," in Col 7; Fig 3, 4B, 6A; see also Button table in Col 7).

Per claim 8:

The rejection of claim 1 is incorporated, and further, Minard discloses an interrupt assignment parameter group designator ("setting watches or breakpoints," col 6 Menu table; col 3 lines 20-30; Button table in col 7)

Per claim 9:

The rejection of claim 1 is incorporated, and further, Minard discloses each interrupt assignment parameter group designator(col 6 Menu table; col 3 lines 20-30; Button table in col 7)

Per claim 10:

The rejection of claim 8 is incorporated, and further, Minard discloses a method signature entry field ("method signatures for public methods," col 13 lines 20-28)

Per claim 11:

The rejection of claim 1 is incorporated, and further, Minard discloses

Art Unit: 2124

a new virtual machine creator (col 5 lines 16-30).

Per claim 12:

The rejection of claim 11 is incorporated, and further, Minard discloses a routine prompting a user to enter data needed to create a new virtual machine ("receiving user commands and data," col 4 lines 55-67; See Fig 5B; Menu table in col 6)

Per claim 13:

The rejection of claim 12 is incorporated, and further, Minard discloses that said routine also automatically retrieves data needed to create a new virtual machine ("It comes up automatically if the user does not click any ...tabs," col 12 lines 5-14).

Per claim 14:

The rejection of claim 1 is incorporated, and further, Minard discloses a resource manager ("utility wizards for bundling resources," Menu table in col 6).

Per claim 15:

The rejection of claim 14 is incorporated, and further, Minard discloses that said resource manager further comprises a resource determination algorithm. ("Utility wizards for bundling resources," Menu table in col 6).

Per claim 16:

Art Unit: 2124

The rejection of claim 15 is incorporated, and further, Minard discloses a resource modification interface (col 6, lines 35-67).

Per claim 17:

The rejection of claim 16 is incorporated, and further, Minard discloses a resource allocation interface (col 6, lines 35-67).

Per claim 18:

The rejection of claim 16 is incorporated, and further, Minard discloses a resource removal interface. (col 6, lines 35-67).

Per claim 19:

The rejection of claim 1 is incorporated, and further, Minard discloses a parameter determination algorithm ("parameters dialog box," col 7 lines 5-35).

Per claim 20:

The rejection of claim 19 is incorporated, and further, Minard discloses
20] The computer-implemented builder tool of claim 19, wherein said parameter determination algorithm comprises a parameter prioritization structure ("parameters dialog box," col 7 lines 5-35).

Per claim 21:

Bayeh discloses a multiple virtual machine environment ("computer program for enabling multiple virtual machines to execute on a single server, using virtual machine pooling" abstract). Bayeh does not explicitly teach using a builder tool to create a target

Art Unit: 2124

executable file for a multiple virtual machine environment. However, Minard teaches a builder tool to create a target executable file was known in the art of software development, at the time applicant's invention was made, to ease software development effort, increase one's productivity providing a user friendly development environment such that disclosed in Minard (col 3 lines 20-40). It would have been obvious for one skilled in the art of computer software development to modify Bayeh's disclosed system to use a builder tool for a multiple virtual machine environment. The modification would be obvious because one skilled in the art would be motivated to "increase one's productivity,... and simplify one's job (col 3 lines 20-40)" providing a user friendly development environment as taught by Minard.

Minard further discloses:

- receiving, by the builder tool, compiled source code of a first application (col 7 lines 8-35;Fig 3; col 6 Menu table)
- receiving, by the builder tool, compiled source code of a second application (col 7 lines 8-35;Fig 3; col 6 Menu table)
- creating, by the builder tool, a first relocatable virtual machine to run the compiled source code of the first application ("Build|Make," Button menu in col 6-7)
- creating, by the builder tool, a second relocatable virtual machine to run the compiled source code of the second application ("Build|Make," Button menu in col 6-7)
- determining, by the builder tool, parameters (col 8 lines 52-63)
- locating, by a locating tool of the builder tool, said first relocatable virtual machine and said second relocatable virtual machine (Search|Search in col 7)

-generating a target executable file (Run|Run in col 7)

Per claim 22:

The rejection of claim 21 is incorporated, and further, Minard discloses receiving, by the builder tool, compiled source code of a third application (col 7 lines 8-35; Fig 3; col 6 Menu table) creating, by the builder tool, a third relocatable virtual machine to run the compiled source code of the third application ("Build|Make," Button menu in col 6-7) wherein said locating step said also locates the third relocatable virtual machine (Search|Search in col 7)

Per claim 23:

The rejection of claim 21 is incorporated, and further, Minard discloses -receiving, by the builder tool, a plurality of additional compiled source codes, each additional compiled source code of said plurality of additional compiled source codes being related to an additional application (col 13 lines 55-67; col 14 lines 30-40); -creating, by the builder tool, a plurality of additional relocatable virtual machines, each additional relocatable virtual machine of said plurality of additional relocatable virtual machines being created to run one of the additional compiled source codes of said plurality of additional compiled source codes (col 7 lines 5-50; col 8 lines 52-63) and wherein said locating step said also locates said plurality of additional relocatable virtual machines (col 7 lines 7-35; col 11 lines 30-45)

Per claim 23:

The rejection of claim 21 is incorporated, and further, Minard discloses searching for user-defined parameters (col 7 lines 7-35)

Art Unit: 2124

Per claim 24:

The rejection of claim 21 is incorporated, and further, Minard discloses searching for resource defined parameters (col 6 lines 37-67).

Per claim 26:

The rejection of claim 25 is incorporated, and further, Minard discloses searching for target hardware configuration defined parameters (col 7 lines 7-50).

Per claim 27:

The rejection of claim 26 is incorporated, and further, Minard discloses searching for runtime defined parameters (col 7 lines 7-50).

Per claim 28:

The rejection of claim 27 is incorporated, and further, Minard discloses searching for default parameters(col 7 lines 7-50).

Per claim 29:

The rejection of claim 21 is incorporated, and further, Minard discloses a set of first application relocatable objects and an associated set of first application runtime relocatable objects (col 11 lines 30-55); and wherein said compiled source code of a second application comprises a set of second application relocatable objects and an associated set of second application runtime relocatable objects (col 6 lines 37-67).

Per claim 30:

The rejection of claim 21 is incorporated, and further, Minard discloses generation of a related list file and a related load script file ("script with a Java compiler," col 5 lines 16-31).

Art Unit: 2124

Per claim 31:

The rejection of claim 24 is incorporated, and further, Minard discloses searching for user-defined parameters comprises searching for an interrupt routine entered as a method signature by a user (col 6 lines 35-67).

Per claim 32:

The rejection of claim 24 is incorporated, and further, Minard discloses searching for user-defined parameters comprises searching for user-entered virtual machine build data (col 6 lines 35-67).

Per claim 33:

The rejection of claim 21 is incorporated, and further, Minard discloses guiding, by said builder tool, a user to enter data needed to create a new virtual machine (col 7 lines 5-50; Fig 5B).

Per claim 34:

The rejection of claim 21 is incorporated, and further, Minard discloses establishing a count of available resources (col 10 lines 1-19).

Per claim 35:

The rejection of claim 34 is incorporated, and further, Minard discloses dynamically updating information on the count of available resources in real time (col 6 lines 35-67)

Per claim 36:

The rejection of claim 35 is incorporated, and further, Minard discloses allocating resources by a user of the builder tool (col 6 lines 1-15).

Art Unit: 2124

Per claim 37:

The rejection of claim 35 is incorporated, and further, Minard discloses removing resources by a user of the builder tool (col 6 lines 37-65)

Per claim 38:

The rejection of claim 21 is incorporated, and further, Minard discloses assigning an interrupt routine to a method by entry, by a user of the builder tool, of an identifying method signature ("method signatures for public methods," col 13 lines 20-28)

Per claim 39:

The rejection of claim 21 is incorporated, and further, Minard discloses dynamically updating information on the determined parameters in real time (col 6 lines 35-67).

Per claim 40:

Bayeh discloses a multiple virtual machine environment ("computer program for enabling multiple virtual machines to execute on a single server, using virtual machine pooling" abstract). Bayeh does not explicitly teach using a builder tool to create a target executable file for a multiple virtual machine environment. However, Minard teaches a builder tool to create a target executable file was known in the art of software development, at the time applicant's invention was made, to ease software development effort, increase one's productivity providing a user friendly development environment such that disclosed in Minard (col 3 lines 20-40). It would have been obvious for one skilled in the art of computer software development to modify Bayeh's disclosed system

Art Unit: 2124

to use a builder tool for a multiple virtual machine environment. The modification would be obvious because one skilled in the art would be motivated to "increase one's productivity,...and simplify one's job (col 3 lines 20-40)" providing a user friendly development environment as taught by Minard.

Minard further discloses build parameters (see Build menu in col 6 lines 24-67).

Per claim 41:

The rejection of claim 40 is incorporated, and further, Minard discloses :build parameters is structured to perform a prioritized search based on how the parameter was defined (see Search menu in col 6 lines 35-67).

Per claim 42:

The rejection of claim 40 is incorporated, and further, Minard discloses resources (see Wizards menu in col 6 lines 35-67).

Per claim 43:

The rejection of claim 40 is incorporated, and further, Minard discloses - permit user allocation of an available resource (see Tools menu: Displaying the Environment Options dialog," col 6 lines 40-67).

Per claim 44:

The rejection of claim 40 is incorporated, and further, Minard discloses -dynamically update available resource data throughout the builder tool, in real time, upon determining the available resources (Tools menu in col 6 lines 40-67).

Per claim 45:

The rejection of claim 40 is incorporated, and further, Minard discloses

Art Unit: 2124

- dynamically update available build parameter data throughout the builder tool, in real time, upon determination of build parameters (Tools and Build menus in col 6 lines 40-67).

Per claim 46:

The rejection of claim 40 is incorporated, and further, Minard discloses a routine to permit user configuration of hardware pins via a graphical user interface (col 6 lines 65-67 and col 7 lines 1-7).

Per claim 47:

Bayeh discloses a multiple virtual machine environment ("computer program for enabling multiple virtual machines to execute on a single server, using virtual machine pooling" abstract). Bayeh does not explicitly teach using a builder tool to create a target executable file for a multiple virtual machine environment. However, Minard teaches a builder tool to create a target executable file was known in the art of software development, at the time applicant's invention was made, to ease software development effort, increase one's productivity providing a user friendly development environment such that disclosed in Minard (col 3 lines 20-40). It would have been obvious for one skilled in the art of computer software development to modify Bayeh's disclosed system to use a builder tool for a multiple virtual machine environment. The modification would be obvious because one skilled in the art would be motivated to "increase one's productivity, ... and simplify one's job (col 3 lines 20-40)" providing a user friendly development environment as taught by Minard.

Minard further discloses:

Art Unit: 2124

- build parameters(see Build menu in col 6 lines 24-67)
- said algorithm to determine build parameters being structured to perform a prioritized search based on how the parameter was defined (see Search menu in col 6 lines 35-67); said code further comprising an algorithm to determine available resources(Tools menu in col 6 lines 40-67) said algorithm to determine available resources being structured to permit user allocation of an available resource(see Tools menu: Displaying the Environment Options dialog," col 6 lines 40-67) said code further comprising an algorithm to dynamically update available resource data throughout the builder tool, in real time, upon determining the available resources(Tools and Build menus in col 6 lines 40-67); said code further comprising an algorithm to dynamically update available build parameter data throughout the builder tool, in real time, upon determination of build parameters(Tools and Build menus in col 6 lines 40-67) and said code further comprising a routine to permit user configuration of hardware pins via a graphical user interface(col 6 lines 65-67 and col 7 lines 1-7).

Response to Arguments

8. Applicant's arguments filed 9/27/2004 have been fully considered but they are not persuasive.

Per claims 1-20 and 40-48:

Art Unit: 2124

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. The Applicant simply states that the "combination does not disclose an overview component depicting a plurality of virtual machines or a concurrently displayed parameter detail component showing parameter information related to one of a plurality of virtual machines (page 5)." The applicant fails to show that the reasons to combine and motivations concerning the rejections of claims are improper. The applicant's argument is based on a single reference, Minard, not in combination with teachings by Bayeh. Further, the examiner points out that claims 40 -47 do not recite the limitation, "an overview component depicting a plurality of virtual machines or a concurrently displayed parameter detail component showing parameter information related to one of a plurality of virtual machines (page 5)" and the claims do not specifically define what the multiple virtual machine environment is. As has been addressed above, Bayeh discloses a multiple virtual machine environment ("computer program for enabling multiple virtual machines to execute on a single server, using virtual machine pooling" abstract) and Minard teaches a user friendly builder tool to create a target executable file, to ease software development effort, increase one's productivity providing a user friendly development environment (col 3 lines 20-40). It would have been obvious for one skilled in the art of computer software development to modify Bayeh's disclosed system to use a builder tool for a multiple virtual machine environment. The modification would be obvious because one skilled in the art would be motivated to "increase one's

Art Unit: 2124

productivity...and simplify one's job (col 3 lines 20-40)" providing a user friendly development environment as taught by Minard (see Build menu in col 6 lines 24-67). Therefore, the rejection of claims 1-20 and 40-48 is considered proper and maintained.

Per claims 21-39:

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. The Applicant simply states that Minard does not disclose, "creating two relocatable virtual machines...locating the two created relocatable machines. Minard does not operate in a multiple virtual environment...does not disclose the determination of parameters for a multiple virtual machine environment (page 6)." The applicant fails to show that the reasons to combine and motivations concerning the rejections of claims are improper. The applicant's argument is based on a single reference, Minard, not in combination with teachings by Bayeh. Also, the claims do not specifically define what the multiple virtual machine environment is; multiple virtual machines running on multiple processors or a single processor, etc. As has been addressed above, Bayeh discloses a multiple virtual machine environment ("computer program for enabling multiple virtual machines to execute on a single server, using virtual machine pooling" abstract) and Minard teaches a user friendly builder tool to create a target executable file, to ease software development effort, increase one's productivity providing a user friendly development environment (col 3 lines 20-40). It would have been obvious for

one skilled in the art of computer software development to modify Bayeh's disclosed system to use a builder tool for a multiple virtual machine environment. The modification would be obvious because one skilled in the art would be motivated to "increase one's productivity,...and simplify one's job (col 3 lines 20-40)" providing a user friendly development environment as taught by Minard. Therefore, the combination of Bayeh and Minard teaches creating, by the builder tool ... (Minard, "Build|Make," Button menu in col 6-7) determining, by the builder tool, parameters (Minard, col 8 lines 52-63), accordingly. Therefore, the rejection of claims 21-39 is considered proper and maintained.

Conclusion

9. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2124

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 571-272-3724.

The examiner can normally be reached on M-F 9:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on 571-272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

I. Kang
1/25/2005


KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100